

## INTERNATIONAL SEARCH REPORT

Inten      Application No  
PCT/EP2004/052292

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7    B01J31/02    B01J23/755    B01J23/44    C07C2/08

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7    B01J    C07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	M.F. PINHEIRO, R.S. MAULER, R.F. DE SOUZA: "Biphasic Ethylene Polymerization with a Diiminonickel Catalyst" MACROMOL. RAPID COMMUN., vol. 22, 2001, pages 425-428, XP002279101 the whole document	1-13
A	Y. CHAUVIN, S. EINLOFT, H. OLIVIER: "Catalytic Dimerization of Propene by Nickel-Phosphine Complexes in 1-Butyl-3-methylimidazolium Chloride/AlEt <sub>x</sub> Cl <sub>3-x</sub> (x=0,1) Ionic Liquids" IND. ENG. CHEM. RES., vol. 34, 1995, pages 1149-1155, XP002279102 the whole document	1-13

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

17 December 2004

Date of mailing of the international search report

23/12/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Schoofs, B

## INTERNATIONAL SEARCH REPORT

Inter... Application No  
PCT/EP2004/052292

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CHAUVIN Y ET AL: "Oligomerization ofn-Butenes Catalyzed by Nickel Complexes Dissolved in Organochloroaluminate Ionic Liquids" JOURNAL OF CATALYSIS, ACADEMIC PRESS, DULUTH, MN, US, vol. 165, no. 2, 15 January 1997 (1997-01-15), pages 275-278, XP004459645 ISSN: 0021-9517 the whole document	1-13
A	US 2003/166985 A1 (ZUSHMA STEPHEN ET AL) 4 September 2003 (2003-09-04) paragraph '0106!; examples	1-13

## INTERNATIONAL SEARCH REPORT

### Information on patent family members

Inten — Application No  
PCT/EP2004/052292

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003166985 A1	04-09-2003	WO 03072529 A1	04-09-2003

**Best Available Copy**